

CLAIMS

What is claimed is:

1. One or more computer-readable media comprising computer-
5 executable instructions that, when executed, direct a processor to perform acts comprising:

identifying a field on a form and one or more restrictions on an input to the field;

10 identifying validation code that, when executed, validates that the input conforms to the one or more restrictions; and

adding, to a form definition that includes the field, the identified validation code.

2. One or more computer-readable media as recited in claim 1,
15 wherein the computer-executable instructions further direct the processor to perform acts comprising:

adding, to the form definition, a reference to the identified validation code in the form that, when executed by another processor, causes the other processor to execute the identified validation code.

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3. One or more computer-readable media as recited in claim 1, wherein the identifying validation code comprises identifying pre-defined validation code.

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4. One or more computer-readable media as recited in claim 1, wherein the form that defines the field includes a tag corresponding to the field.

5. One or more computer-readable media as recited in claim 1, wherein the input comprises a user input.

6. One or more computer-readable media as recited in claim 1,
5 wherein the identifying validation code comprises:

identifying a custom tag corresponding to the field, wherein the custom tag includes an indication of one or more attributes, and wherein each of the one or more attributes includes a value indicating what input corresponding to the field is to be restricted to; and

10 identifying, from a plurality of pieces of validation code, the validation code corresponding to the one or more attributes of the custom tag.

7. A computerized method comprising:

identifying one or more custom tags to be included in a form definition,
15 wherein each custom tag has one or more associated input restrictions; and
automatically generating the form definition by,

converting each custom tag to another tag format, and
adding, for each converted tag, a validation code that, when
executed, verifies that an input corresponding to the tag satisfies the one
20 or more input restrictions.

8. A method as recited in claim 7, wherein the other tag format comprises a publicly known standard tag format.

9. A method as recited in claim 7, wherein the identifying further comprises identifying one or more tags already in the other tag format, and wherein the automatically generating further comprises adding each of the one or more tags already in the other format to the form definition.

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10. A method as recited in claim 7, wherein the form definition is in a text markup language.

11. A method as recited in claim 7, wherein the input comprises a
10 user input.

12. A method as recited in claim 7, wherein the form definition comprises a HyperText Markup Language (HTML) document.

13. A method as recited in claim 7, wherein the form definition
15 comprises an eXtensible Markup Language (XML) document.

14. A method as recited in claim 7, wherein the input restrictions
include one or more of the following: whether input corresponding to the tag is
20 required, a maximum length of the input corresponding to the tag, and a
minimum length of the input corresponding to the tag.

15. A method as recited in claim 7, wherein one of the one or more
associated input restrictions identifies additional validation code to be executed.

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16. A method as recited in claim 7, wherein each input restriction includes an indication of the input restriction and a corresponding value that input corresponding to the tag is to be restricted to.

5 17. A method as recited in claim 7, wherein the automatically generating further comprises:

generating a temporary form definition;

adding each converted tag to the temporary form definition;

adding execution code to the temporary form definition;

10 executing, after all of the custom tags to be included in the form definition have been identified, the execution code to add the validation code to the temporary form definition; and

outputting, as the form definition, the temporary form definition.

15 18. A method as recited in claim 17, wherein the executing further comprises adding, to the temporary form, a call to invoke the added validation code.

19. A computerized method comprising:

20 identifying one or more desired fields to be included on a form via which data can be input; and

automatically adding validation code to source code of the form, wherein the validation code is based at least in part on the one or more desired fields and one or more desired input restrictions associated with the one or
25 more desired fields.

20. A method as recited in claim 19, wherein the identifying comprises identifying a custom tag corresponding to each of the one or more desired fields, wherein each custom tag has one or more validation attributes, and wherein each validation attribute includes an indication of the attribute and
5 a corresponding value that input corresponding to the custom tag is to be restricted to.

21. A method as recited in claim 19, wherein the input comprises a user input.

10 22. A method as recited in claim 19, wherein the automatically adding comprises:

generating a temporary form definition;
adding execution code to the temporary form definition;
15 executing the execution code to add the validation code to the temporary form definition; and
outputting, as the source code, the temporary form definition.

23. A system comprising:

20 a form analyzer configured to identify one or more custom tags associated with a form; and

a tag replacement module, coupled to the form analyzer, configured to replace each of the one or more custom tags with another tag, and further to add, to a form definition, for each of the one or more custom tags, validation
25 code to validate subsequent inputs to a field corresponding to the tag.

24. A system as recited in claim 23, wherein the inputs comprise user inputs.

25. A system as recited in claim 23, wherein the system comprises a
5 compiler.

26. A system as recited in claim 23, wherein each of the other tags with which the tag replacement module replaces a custom tag is a HyperText Markup Language (HTML) tag.

10 27. A system as recited in claim 23, wherein the tag replacement module is further configured to add a reference to the added validation code.

15 28. A system as recited in claim 23, wherein the tag replacement module is further configured to generate a new document corresponding to the page, to replace each of the one or more custom tags with another tag by adding the other tag to the new document, and to add validation code by adding the validation code to the new document.

20 29. A system as recited in claim 23, wherein a plurality of the one or more custom tags have restrictions corresponding to the same validation code, and wherein the tag replacement module is further configured to add the same validation code only once.

25 30. A system as recited in claim 23, further comprising a tag library, coupled to the tag replacement module, to store the validation code.

31. A system as recited in claim 30, wherein the tag library is further to store an identification of the one or more custom tags.

32. A method comprising:

5 receiving a form definition including one or more custom tags, wherein each custom tag corresponds to a data input, and wherein each custom tag has one or more associated input restrictions; and

for each of the one or more custom tags,

identifying a replacement non-custom tag,

10 adding the identified replacement non-custom tag to a new form definition,

identifying validation code that, when executed based on an input corresponding to the tag, validates whether the associated input restrictions are satisfied, and

15 adding the identified validation code to the new form definition.

33. A method as recited in claim 32, wherein the method further comprises, for each of the one or more custom tags:

20 adding, to the new form definition, a reference to invoke the added validation code.

34. A method as recited in claim 32, wherein the receiving further comprises receiving, as part of the form definition, one or more non-custom tags, and wherein the method further comprises adding each of the non-custom
25 tags to the new form definition.

35. A method as recited in claim 32, wherein the data input comprises data input by a user.

36. A method as recited in claim 32, wherein each input custom tag includes one or more attributes that identify the one or more associated input restrictions, and wherein each of the one or more attributes includes an indication of the attribute and a corresponding value that data input corresponding to the tag is to be restricted to.

37. A method as recited in claim 32, wherein adding the identified validation code comprises:

adding execution code to the new form definition; and
executing the execution code to add the identified validation code to the new form definition.

38. A data structure comprising:
a first portion identifying an input field for a form; and
a second portion identifying one or more restrictions on inputs to the input field, and further identifying validation code to be added to a page to enforce the one or more restrictions on inputs to the input field.

39. A data structure as recited in claim 38, wherein the data structure comprises a text markup language document.

40. A data structure as recited in claim 38, wherein the first portion further identifies a type of the input field.

41. A data structure as recited in claim 38, wherein the second portion comprises a set of one or more attributes and, for each attribute, an associated value for the attribute.

5 42. A data structure as recited in claim 38, wherein the input field is for user-input of data.